

1792A  
EA-02-07  
Lake Creek  
Road Improvement Project

May 14, 2002

Concerned Citizen,

The Coast Range Resource Area of the Eugene District Bureau of Land Management has completed the Environmental Assessment (EA) and Preliminary Finding of No Significant (FONSI) for the Lake Creek Road Improvement Project. The proposed project would improve approximately 10 miles of existing Road Nos. 15-7-23, 15-7-17, 15-7-26 and 15-7-35.

You have expressed an interest in receiving copies of Environmental Assessments for district projects. Enclosed is a copy of the Environmental Assessment for your review and any comments. Public notice of this proposed action will be published in the Eugene Register Guard on May 15, 2002. The EA will also be available on the internet at <http://www.edo.or.blm.gov/nepa>. The public comment period will end on May 30, 2002. Please submit comments to me at the district office, by mail or by e-mail at [OR090mb@or.blm.gov](mailto:OR090mb@or.blm.gov) by close of business (4:15 p.m.) on or prior to May 30, 2002. If you have any questions concerning this proposal, please feel free to call Eric Meyers at 541-683-6499.

Comments, including names and street addresses of respondents, will be available for public review at the district office, 2890 Chad Drive, Eugene, Oregon during regular business hours (7:45 a.m. to 4:15 p.m.), Monday through Friday, except holidays, and may be published as part of the EA or other related documents. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Sincerely,

Diana Bus, Acting

Steven A. Calish  
Field Manager

Enclosure

**ENVIRONMENTAL ASSESSMENT  
FOR  
LAKE CREEK ROAD IMPROVEMENT**

**OR O90-EA- 02-07**

**MAY 2002**

Prepared by:\_\_\_\_\_ Date: 5/7/02

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UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
EUGENE DISTRICT

ENVIRONMENTAL ASSESSMENT NO. OR O90-02-07

LAKE CREEK ROAD IMPROVEMENT

**I. INTRODUCTION**

The Bureau of Land Management (BLM) proposes to improve approximately 10 miles of existing Road Nos. 15-7-23, 15-7-17, 15-7-26 and 15-7-35 within the Lake Creek watershed. The improvement would upgrade existing aggregate surfaced road to a paved surface (Bituminous Surface Treatment or “chip seal”). The project would also replace, repair or install additional drainage structures to improve drainage efficiency. This project is located in the Lake Creek Special Recreation Management Area (SRMA), approximately 13 air miles west of Junction City, Oregon.

**A. Best Management Practices (BMP) for road renovation/improvement within the Eugene District, BLM**

1. The objective of the BMP for road renovation/improvement as directed under the Eugene District ROD/RMP is to restore or improve a road to a desired standard to minimize sediment production and water quality degradation. The following are some examples of practices that would result from the implementation of the proposed action:
  - Replace undersized culverts and repair damaged culverts and downspouts.
  - Restore outslope or crown sections.
  - Surface inadequately surfaced roads that are left open to traffic during wet weather.
2. Replace culverts that are migration barriers to aquatic species.

**B. CONFORMANCE**

This Environmental Assessment (EA) is tiered to and in conformance with the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the*

*Northern Spotted Owl (ROD), April 1994, and the Eugene District Record of Decision and Resource Management Plan, June 1995 (Eugene District ROD/RMP) as amended by the Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, USDA Forest Service and USDI Bureau of Land Management January 2001. Actions proposed in this EA are in conformance with the (Aquatic Conservation Strategy Objectives, page B-11) and the Standards and Guidelines for Riparian Reserves (pages C-31 to C-37) of the ROD., and the Late-Successional Reserve Assessment, Oregon Coast Province, Southern Portion (RO267, RO268), June 1997.*

### **C. PURPOSE OF AND NEED FOR ACTION**

The purpose and need of the proposed action are to provide a safe surface on a main road that is traveled frequently by the public and by BLM . The proposed action would improve skid resistance and establish traffic lanes. It would also minimize potholes, eliminate a washboard roadbed, and reduce routine maintenance costs by eliminating the need for blading.

The three roads in the Proposed Action are primary routes used frequently by the public. The Ferguson connector serves as a secondary route from Junction City to Triangle Lake. All three roads are poorly surfaced and have worn and undersized drainage structures, leading to sedimentation during periods of wet weather. All three roads have culverts that bar migration for aquatic species.

Watershed analysis was completed for the Lake Creek Watershed and supported the need for road renovation and improvement to reduce sedimentation and to best attain ACS objectives.

This project would provide better safety to the public and should improve recreational access for passenger cars, recreational vehicles, and bicycles while also accommodating some equestrian use.

## **II. ISSUES FOR ANALYSIS**

- A. Road Nos. 15-7-23, 15-7-17 (Prairie Mtn), and 15-7-35(Lake Creek) along Hult Pond may be proposed as a designated equestrian route in the Upper Lake Creek, Recreation Area Management Plan (RAMP). The proposed action to pave the road surface may provide less traction for equestrian travel than a rocked surface, particularly on steeper grades.
- B. The nesting location and status of a spotted owl pair in the vicinity may be affected by the Proposed Action.

### III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

#### A. ALTERNATIVE 1 – PROPOSED ACTION (Road Renovation/Improvement)

The Proposed Action would recondition the existing roadbed by placement of compacted aggregate. The aggregate surface would be primed with an emulsified asphalt and chip-sealed, resulting in a paved surface. The proposed action would also replace worn culverts and install additional culverts as necessary to facilitate both ditch relief and stream crossings. It would install barrier-free replacement culverts. Replacement culverts would comply with current BLM standards. All activity would occur within the road prism.

The proposed action is expected to occur over a three to six year period in phases described as follows. Refer to the EA Map.

**Phase I: Road No. 15-7-26 (Ferguson Road)** – Beginning at the junction with Road No. 15-7-36, this project is approximately 3 miles in length, ending at the Hult Pond Dam (T.15 S., R.6 W., Section 19, and T.15 S., R.7 W., Sections 24, 25, and 26).

**Phase II: Road No. 15-7-35 (Lake Creek)** – Beginning at the end of County Road near the Horton store, this project is approximately 3 miles in length and stops at a bridge crossing Lake Creek, which is located at the approximate section line between Sections 23 and 14 (T.15 S., R.7 W., Sections 23, 26, and 35).

**Phase III: Road Nos. 15-7-23 and 15-7-17 (Prairie Mountain)** – Beginning at the junction with Road No. 15-7-35, this project is approximately 4 miles in length and ends at the junction with

Road No. 15-7-17 and 0.5 mile past this junction on Road No. 15-7-17 (T.15 S., R.7 W., Sections 16, 17, 21, 22, and 23).

**DESIGN FEATURES** – The following project design features would be implemented in conjunction with the Proposed Action:

1. The public shall be notified of the road closure a minimum of 15 days prior to the beginning of operations. Closure signs shall be installed and maintained throughout the project from all entrances.
2. To minimize the spread of noxious weeds, cleaning of heavy equipment prior to entering and leaving BLM land would be required.

3. Construction operations would be limited to periods of dry weather between July 1<sup>st</sup> and September 15<sup>th</sup>.
4. Construction operations shall be modified as necessary to comply with recommended measures to protect species listed under the Endangered Species Act. Any measures are contingent on a pending Biological Opinion by the U.S. Fish and Wildlife Service.
5. To help maintain the existing native plant communities, roadsides would be seeded with native species mixtures. If native seed is not available a nonnative seed mixture could be used. This nonnative seed would be composed of an annual (70%) and perennial (30%) rye mixture with strict guidelines on seed purity (little crop content and no noxious weed content).

**B. ALTERNATIVE 2 – MODIFIED PROPOSED ALTERNATIVE**

This alternative would differ from the Proposed Action by deleting the paved bituminous surface treatment. Instead the roads would be surfaced with an 8-inch lift of compacted aggregate on Phase III, Road Nos. 15-7-23 and 15-7-17 (Prairie Mountain). All other design features would remain the same as the Proposed Action. The purpose of this alternative would be to provide a better surface for equestrian use.

**C. ALTERNATIVE 3 – MODIFIED PROPOSED ALTERNATIVE**

This alternative would differ from the Proposed Action by deleting the paved bituminous surface treatment. Instead the roads would be surfaced with an 8 inch lift of compacted aggregate, on Phase II, Road No. 15-7-35 (Lake Creek) beyond the junction with Road No. 15-7-26 and Phase III, Road Nos. 15-7-23 and 15-7-17 (Prairie Mountain). The purpose of this alternative would be to provide a better surface for equestrian use. All other design features would remain the same as the Proposed Action.

**D. ALTERNATIVE 4 – NO ACTION**

The alternative leave would the road system in its current condition.

**IV. AFFECTED ENVIRONMENT**

**A. LANDSCAPE DESCRIPTION**

**Oregon Coast Range Province** – The Oregon Coast Range Province contains 2.95 million acres, extending from the Columbia River to the Umpqua River Basin. The

Coast Range Province includes coastal mountains of Western Oregon from the Columbia River to the Middle Fork of the Coquille River, and from the continental shelf to the western edge of the Willamette Valley.

**Siuslaw River Basin** – The proposed road improvement project lies within the Lake Creek Watershed of the Siuslaw River Basin. The Siuslaw River Basin provides an integral portion of the inland habitats for the entire run of native mid-Oregon Coast coho salmon. With essentially three river systems providing habitat for this run, the Siuslaw River system is important to the long-term survival of the coho salmon. Four species of anadromous salmonids are found in the basin: coho and chinook salmon, steelhead, and cutthroat trout. The Alsea River Basin lies immediately to the north of the Siuslaw River Basin, and the Willamette River Basin lies immediately to the east and northeast of the Siuslaw River Basin.

**Lake Creek Watershed** – The proposed road improvement project is located in the Lake Creek Watershed. Watershed analysis has been completed for this watershed. This 5<sup>th</sup> field watershed is highly dissected by intermittent and perennial streams. Streams in the upper portions of this watershed, where Phases 1 and 3 of the proposed project are located, have higher gradients with steep, high ridges separating the streams. Phase 2 of the proposed action lies adjacent to or within close proximity to lower gradient areas of Lake Creek and Hult Reservoir.

The Lake Creek Watershed lies at the northeastern headwaters of the Siuslaw River Basin and is located in Lane County, west of the city of Eugene. The watershed contains approximately 68,771 acres. The watershed is owned in checkerboard pattern with approximately 31,950 acres administered by the BLM. This project is located within the Upper Lake Creek Special Recreation Management Area (SRMA) in the northern center of the Coast Range Resource Area, approximately 13 air miles west of Junction City, Oregon.

## **B. LAND USE ALLOCATIONS**

The proposed Lake Creek Road Improvement includes lands within Matrix (GFMA) Riparian Reserves, and Late-Successional Reserves land use allocations (LUA). The majority of the road improvement is within the Matrix and Riparian Reserve LUAs.

- C. VEGETATION** – The proposed road improvements would lie within the rights-of-way for existing, frequently used road routes within the Lake Creek Watershed. These road systems and their adjacent road banks and ditchlines are characterized as areas of high disturbance, due to the associated road use (i.e., timber hauling, rock hauling, and recreational use) and road maintenance that routinely occur within the road right-of-ways.

The adjacent terrain or topography of the general area contains the Western Hemlock Vegetation (*Tsuga heterophylla*) Zone, named for the “climax species” that eventually dominates the forested plant community. Douglas-fir is currently the dominant tree species within the watershed. Forest harvesting has left a landscape made up of stands of fragmented second growth conifer, some old growth and mature conifer, young conifer, shrub/grass-forb, hardwoods, and mixed stands in a variety of patch sizes. The spatial distribution of the various seral stages is not uniform throughout the watershed and is heavily dependent upon several factors, including fire history and past management. Red alder and bigleaf maple often dominate along streams and rivers within the watershed.

The major coniferous tree species within the watershed include Douglas-fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), incense cedar (*Calocedrus decurrens*), and grand fir (*Abies grandis*). Hardwood species include red alder (*Alnus rubra*), bigleaf maple (*Acer macrophyllum*), golden chinquapin (*Castanopsis chrysophylla*), Pacific madrone (*Arbutus menziesii*), and Pacific dogwood (*Cornus nutallii*).

The shrub and ground cover species associated with these forested plant communities are varied. Common understory species include vine maple (*Acer circinatum*), hazel (*Corylus cornuta*), ocean spray (*Holodiscus discolor*), salal (*Gaultheria shallon*), Cascade Oregon grape (*Berberis nervosa*), salmonberry (*Rubus spectabilis*), poison-oak (*Rhus diversiloba*), and sword fern (*Polystichum munitum*) (Lake Creek Watershed Analysis, 1995).

#### **D. BOTANY**

The proposed project area is within the immediate road prism, has a history of past disturbance, and was determined to contain no suitable habitat for Survey and Manage species. No surveys are required.

#### **E. NOXIOUS WEEDS AND NONNATIVE PLANT SPECIES**

Scotch broom and meadow knapweed are present within the project. Both species are long-lived perennials with seeds that remain viable for a long time in the soil. Both species are spread by vehicles, people, and animals. They occur on neighboring private land and public lands outside the project area. The meadow knapweed has been mowed in the past to reduce seed set.

#### **F. CULTURAL RESOURCES**

A cultural resource inventory of the proposed area has not been conducted. Past



pre-project cultural resource surveys conducted in conjunction with surface disturbance in the Coast Range physiographic province have not resulted in the discovery of significant cultural properties. Following the signing of the national Programmatic Agreement, the Oregon BLM and the Oregon Historic Preservation Office developed a protocol agreement recognizing the paucity of discoverable historic properties in the Coast Range. Under this protocol pre-project cultural resource surveys will not be conducted in the Coast Range physiographic province. The Protocol Agreement does set forth procedures covering post-project cultural resource surveys that would be implemented.

## G. GEOLOGY

The Ferguson/Lake Creek/Prairie Mountain roads proposed for chip seal are mapped generally within the Flournoy/Tyee Formation that consists of massive and rhythmically bedded feldspathic and micaceous sandstone and subordinate siltstone. Each bed is graded and ranges from coarse sandstone at the base to fine sandstone and siltstone above. Some of the area, such as the Prairie Peak ridgeline, is composed of sheets, sills, and dikes of mafic intrusions of basalt rock (Walker and Macleod, 1991).

High-risk sites for landslides exist in the Coast Range. Inventories on BLM lands have identified some areas as potentially unstable. These areas have been withdrawn from management activities using the Timber Production Capability Classification (TPCC) FGNW. Although many segments of roads that have been identified as unstable have had corrective action taken, flood events, steep slopes, and concentrated flows on roads may lead to the development of unstable areas. Although landslides naturally provide hydraulic structure and fish habitat with gravels, cobbles, boulders, and large wood, forest roads have accelerated the frequency of landslides (Sessions, 1987) and produced acres of unproductive soils.

## H. SOILS

Soils in the area have developed from sedimentary rocks and are deep, permeable, and productive. Site Index for the soils in the area ranges between 120 and 180 (SCS, 1987). This area is located within the udic-mesic moisture regime and is generally in the **Bohannon-Digger-Preacher Soil Association**. Typically, this map unit consists of 40% Bohannon soils, 25% Digger, and 20% Preacher. Some of the soil series associated with these soils include Peavine, Honeygrove, Klickitat, and Blachly. Because permeability is rapid in many of the Coast Range soils, they tend to have rapid runoff and a high hazard of water erosion, particularly on steep slopes. Vegetation, slope, soil texture, soil infiltration rates, and climate are the most important influences on the erosion hazards of a site. A variety of these combinations exist in the Coast Range contributing to a naturally high background

erosion rate. In general, background erosion rates are documented to be two to four times higher in the Coast Range than in the Cascade Range (Larson and Sidle, 1980).

The **Bohanon** soil series are loamy, very porous, and depth to weathered bedrock ranges from 20 to 40 inches. Soil is easily compacted. **Digger** soils range from shallow to moderately deep and are well-drained, loamy soils that are stony and porous. **Preacher** soils are loamy clays that are well drained, moderately permeable, and easily compacted. The **Honeygrove** series are deep, red, well-drained, silty clay loams that are easily compacted. Depth to bedrock ranges between 60 to 100 inches. **Klickitat** soils are loamy, deep reddish brown, and typically are stony and cobbly. Depth to bedrock ranges from 40 to 60 inches. The **Peavine** series consists of moderately deep, well-drained, red, silty clay loam soils that are easily compacted, with depths to bedrock ranging from 40 to 50 inches. **Blachly** soils are clay loams with effective rooting depths to 60 inches and are easily compacted.

The soil temperatures remain warm and moist through late spring and early summer in the Coast Range, and that favors the oxidation of the soluble form of iron, a basic constituent of the parent sandstone and intrusive rocks of the area. With high precipitation, excess amounts of moisture move through the soil profile, removing soluble products of the weathering processes, but stranding the iron and producing soils in the area that are red, such as **Honeygrove** soils.

## I. EXISTING ROAD CLASSIFICATION

**Figure 1** shows the road locations and culverts inventoried during a 1999 Global Positioning System (GPS) project undertaken in Upper Lake Creek. These roads were built more than 50 years ago, and the culverts are deteriorating with age. The roads were built to standards that do not meet today's specifications. Ditch infeed lengths are longer than allowed with construction of new roads. Potential fill failure and mass movement occurrence can result from misdirected drainage to sideslopes of some of the road segments. The following generally defines the type of traffic, surfacing and slope position of the Ferguson/Lake Creek/Prairie Mountain road segments.

**Phase I: Ferguson Road No. 15-6-26** – Ferguson Road is 3 miles of mainline, gravel midslope, and ridge road. The road begins at 800 feet by Hult Reservoir and rises to approximately 1500 feet in elevation. Because the road extends to the ridgeline along the eastern portion of the proposed chip sealing, live stream crossings are limited to the western section of the road near Hult Reservoir. The streams flow into Hult Reservoir and Lake Creek.

**Phase II: Lake Road No. 15-7-35** – Lake Road is about 3 miles of a mainline, gravel, stream adjacent road. The road parallels Lake Creek and the Hult Reservoir at approximately an 800-foot elevation. Stream crossing culverts are present along the entire proposed chip seal project.

**Phase III: Prairie Mtn. Road Nos. 15-7-23 and 15-7-17** – Prairie Mountain Road is about 4 miles of mainline, gravel midslope, and ridge road. The road rises from 800 feet at Hult Reservoir to approximately 1900 feet in elevation. There are no live stream crossings present along the road.

## **J. PROPOSED RECREATION MANAGEMENT AREA**

The Ferguson/Lake Creek/Prairie Mountain roads are located within the Upper Lake Creek Special Recreation Management Area. No projection of future use has been conducted by the BLM, but it can be assumed that with population increase of the southern Willamette Valley, use of the recreation area and these roads will increase.

## **K. OFF HIGHWAY VEHICLE (OHV) USE**

The Ferguson/Lake Creek/Prairie Mountain roads are used by Off Highway Vehicles (OHV). OHV use appears to be on the increase in the Upper Lake Creek area and is impacting an increasing amount of the BLM land base and surrounding areas. Trail bikes use unmarked trails through the forests, using mainlines as connectors from trail to trail. As these trails widen, larger 4 X 4 trucks gain access and range deeper into the forests. Unmaintained roads and trails used by OHVs degrade until no ditch line remain and the treads have deep gullies that carry a concentrated flow of water during rain events, delivering sediment to streams. Drainage can be disrupted by OHV use, then roads become rutted, causing vehicular safety issues.

## **L. WATER QUALITY**

A primary concern related to forest roads is increased sediment delivery to streams and its potential impact on stream biota and water quality. Impact on biotic communities and water quality by sediment is, in part, a function of whether the sediment is deposited or carried downstream after entry into the channel. Turbidity is an indicator of suspended sediment concentration. In Oregon, no more than a ten percent (10%) cumulative increase in natural stream turbidities is allowed, as measured relative to a control point immediately upstream of the turbidity causing activity (OAR 340-41-445 (2) (c)). A key factor in measuring turbidity is the minimum detectable effect (MDE). In some situations, no change is acceptable.

The size of the eroded materials has a profound influence on sediment delivery and the effects on fish habitat and water quality. Larger particle sizes remain in the

vicinity of the erosion site and, if they reach a stream, have a longer residence time in the channel network and can potentially fill pools or contaminate spawning gravels. Smaller particle sizes, particularly silts and clays, once entrained, will be readily transported through the system as suspended sediment, and may be visible only as turbidity during higher flows. Suspended sediments may become a water quality issue as they move downstream from the delivery site.

## **M. SURFACE EROSION FROM FOREST ROADS**

### **1. Sedimentation Rate Factors**

Research shows that surface erosion from roads is primarily a function of road length, widths of road elements (tread, cutslope, and fillslope), cutslope and fillslope vegetative cover, rate of delivery to streams, traffic rates, sediment texture, road configuration, and road surfacing (Reid, 1984).

Heavily trafficked roads are estimated to produce substantially more sediment than low-use roads (Reid and Dunn, 1984; Bilby et al., 1989; (Foltz, 1999). Traffic pumps fines to the surface of the road and grinds the sands into silts and clays. The road tread produces colloidal size particles that can become turbidity in the stream system. Fines delivered from the road tread could fall above estimated background levels and give rise to high levels of suspended sediment and would, theoretically, be detectable through turbidity readings.

In general, forest roads produce sand-sized and smaller sediments from cutslopes and fillslopes with a higher proportion of silt and clay-sized particles coming from the tread. Frequently cutslopes become the main contributor of sediment to a stream crossing and it is, therefore, important to maintain vegetation on cutslopes.

Careful planning for drainage on forest roads is important. Roads located a short distance downslope from a spring or seep make the cutslope of the road susceptible to erosion if the soil becomes saturated. Running water is a principal agent of road erosion. Water running across or in close proximity to roads erodes the soil, exposes roots and rocks, undercuts vegetation, and could lead to fill failures and landslides. Water should be routed so drainage is not diverted down the tread of the road. When slopes are steep, there is a greater potential hazard for erosion by running water; however, equally important is the presence of running water or saturated soils even in flat terrain. Ditch infeed lengths should be kept to a minimum, and water diverted to filter onto the forest floor.

- 2. Road Traffic** – Traffic levels on the Ferguson/Lake Creek/Prairie Mountain roads will increase with population growth of the Willamette Valley and with

the RMP's designation of Upper Lake Creek as a "recreational area." Traffic is the initial cause of road erosion and potential sedimentation.

3. **Sensitivity Test** – From the standpoint of vehicle traffic and sedimentation, paved roads have reduced water quality impacts. A reduction in ditch infeed length, with the addition of relief culverts, also reduces water quality impacts. The amount of fine sediment available on forest roads is largely a function of traffic. Road construction, surfacing material, and maintenance activities also influence fine sediment availability (Reid, 1984). Currently these road segments have gravel surfacing. A test of the sensitivity to road erosion rates to surfacing material has been performed using road models. By changing the surfacing factor in the road erosion calculations to determine how much of a reduction of fine sediment could occur if forest roads were paved, fine sediment yields can be reduced substantially. This suggests that resurfacing these roads with a chip seal could have a significant reduction on sediment yields, a finding that is consistent with that reported in the literature (Reid, 1984; Bilby et al, 1989).

## **N. Fisheries, Aquatic, and Riparian Resources**

A detailed description of the Past and Present Conditions of fish habitat in the Upper Lake Creek drainage is documented in the Lake Creek Watershed Analysis (USDI, 1995) and the Lake Creek Habitat Management Plan and Environmental Assessment (USDI, 2000). Upper Lake Creek and its tributaries are described in relation to stream habitat type, riparian vegetation, and documented fish species. Reference information is also provided in both analyses that pertains to physical and biological characteristics of Hult Pond (reservoir). Coho salmon, Federally listed as threatened, have been documented as using the adjoining project waters for all life stages.

The road network described in Phase 2 of this proposal parallels much of Hult Pond and segments of Lake Creek. Several tributaries of Lake Creek cross under the project road in Section 26. Two of these tributaries are known to be migration barriers to salmonid species that have been identified both below and above culverts (barriers) lying in the road prism. A third barrier culvert crosses under a spur road (15-7-26.2) approximately 50 feet upstream from a project pipe previously mentioned. In Section 23, the project roadway contains several barrier culverts that drain first order tributaries directly into Hult Pond. Fish species could use these tributaries, particularly the lower stream habitats between the lake and the road, as refuge. Available habitat above these culverts is minimal.

Project roads described in Phases 1 and 3 cross no fish-bearing streams, although the lower end of the Phase 1 road segment parallels approximately 150 feet of Hult Reservoir near the dam face.

## **O. Hydrology**

The project is located in the Lake Creek watershed in the vicinity of the Hult pond. Lake Creek is a tributary of the Siuslaw River. There are several small streams flowing into the Hult Pond and into Lake Creek within the proposed project area.

## **P. Wildlife**

Because the proposed action area lies within existing road prisms, habitat modification would be limited to occasional brush or sapling removal on shoulders of the roads. Effects to wildlife would be in the form of human disturbance during the proposed project.

Habitat adjacent to the proposed project crosses several ownerships and is mainly composed of Douglas-fir forest in varying seral stages. A partial list of wildlife species known to occur in the vicinity can be found in Table 3-54 of the Eugene District Resource Management Plan (RMP).

## **Q. Recreation and Visual Resources**

**VRM** – Visual Resource Management (VRM) for the majority of this project is in class III, which is to partially retain the existing character of the landscape. Much of this area is forested lands in various stages of growth. Class II, which is to retain the existing character of the landscape, would include portions of the proposed Phase I and II projects located around Hult Reservoir, which is heavily used for recreational and transportation purposes. The immediate area is basically flat except for the dam drop-off. Vegetation is scarce where visitors have gathered. The area does have small plants, shrubbery, and trees. There are also man-made structures such as the walkway to the gate valve, a concrete vehicle bridge, fish ladder, boulder vehicle barriers, and the roadway.

**Recreation** – Hult Reservoir is known to many visitors as a quiet lake where they enjoy activities such as fishing, swimming, camping, and canoeing. Some local people use the bridge and Rd No. 15-7-26 to travel to northern rural communities. The Oregon State Marine Board prohibited motorboats, except for those propelled by electric motors, on May 16, 1996. Recreation management has been minimal; buck toilets are provided during the summer season, and garbage pickup is done on a routine basis. This site as well as the surrounding vicinity is currently managed as a dispersed recreational area. Hunting, occasional equestrian use, OHV activity, and driving for pleasure are some of the dispersed activities.

## **R. Social Economic**

The history of these roads (Ferguson Road 15-6-26, Road No. 15-7-35 (Lake

Creek), and Prairie Mtn. Roads 15-7-23 and 15-7-17) has been one of heavy use by log trucks, gravel trucks, and recreational vehicles (automobile and trucks). From a public safety standpoint, the traffic on these roads is not compatible with equestrian use, regardless of the type of road surface. Heavy traffic use continues and may increase for these roads.

There is a privately owned gravel pit in the northern portion of T. 15 S., R.7W., Section 14. Gravel trucks haul down the Lake Creek Road (15-7-35), conflicting with equestrian use during late-spring and summer haul periods (May-October).

## **V. ENVIRONMENTAL CONSEQUENCES**

### **A. ALL ALTERNATIVES**

None of the alternatives in this assessment would have cumulative effects on resources beyond those effects analyzed in the documents listed on page 2. The following section supplements those analyses, providing site-specific information and analysis particular to the alternatives considered here.

- 1. Unaffected Resources** – The following resources are either not present or would not be adversely affected by the proposed action or any of the alternatives: Areas of Critical Environmental Concern, prime or unique farm lands, flood plains and wetlands, Native American religious concerns, solid or hazardous wastes, Wild and Scenic Rivers, Wilderness, air quality, and low income or minority populations.
- 2. Cultural Resources** – No cultural resources are expected to be affected. The guidelines of the Memorandum of Understanding between the Bureau of Land Management and the Oregon State Historic Preservation Officer (December 13, 1994) make the conclusion “that the chances of finding important historical properties in the area are such that further cultural resource survey prior to project implementation are so minimal that they do not justify the continued expenditure of Federal funds in this effort”.

### **B. ALTERNATIVE 1 – PROPOSED ACTION**

#### **1. Affected Resources**

**Vegetation** –The proposed action would result in some project related short-term disturbance to vegetation within the road right-of-ways of riparian and upland areas associated with Road Nos. 15-7-23, 15-7-35, 15-7-26 and 15-7-17. Some short term disturbance to vegetation would occur adjacent to stream channels with culvert additions, removals, and replacements. This short term disturbance would result in a temporary reduction of roadside and streamside vegetation in the project areas.

Design feature 5 of the proposed action would help maintain the existing native plant communities by seeding areas of exposed soils susceptible to erosion with a native seed mix. There would be some potential for noxious weed increases and spread from the use of heavy equipment within the right-of-way; however, equipment would be washed to minimize this potential introduction and spread of noxious weeds (Design feature 2).

**Botany** – Since the project is within the road prism that is not suitable habitat for Special Status and Survey and Manage vascular plants, lichens, and bryophytes, no Special Status and Survey and Manage vascular plants, lichens and bryophytes would be affected. As the road prism is heavily disturbed, typically only very common, early seral and weedy species occur in these areas.

**Engineering** – The direct effects of paving the Ferguson/Lake Creek/Prairie Mountain forest roads are to reduce sedimentation to streams and improve the infrastructure of deteriorating culverts and ditch lines. Indirect effects include improving water quality and fish habitat, and providing for a safer road surface for a projected increase in vehicle use.

**Fish** – The direct effect of paving the Phase 2 road segments for the aquatic environment would be a large scale reduction in the amount of silt leaving the road prism and entering fish habitat, particularly in waterways along Road No. 15-7-35 between Horton and the Hult Dam area. Removing barrier culverts here would also allow aquatic species to access potentially critical areas to fulfill life history requirements.

**Hydrology** – The asphalt surfacing of these roads would help to reduce the amount of sediment produced from the roads surface. These roads are heavily used for logging and recreational traffic. The present road condition is creating fine sediments that can be washed into fish-bearing streams. Replacing the culverts to meet current standards would help reduce the risk of culvert failure that could lead to road washout and increased sediment production.

The other alternatives, including the No Action Alternative, involve doing less paving, and in some cases, substituting a layer of rock. The rock would initially help to prevent sediment, but, eventually, soil would come through, and sediment would increase.

**Recreation** – The project could restrict access from the Junction City area to both Hult Reservoir and Triangle Lake for a period of up to two months. The alternative to this route during construction would be Highway 36.



Chip sealing or paving would conflict with the occasional equestrian use, as horses tend to slip on hard surfaces. Equestrians would probably use other non paved road systems.

**Soils** – The direct effect of paving the Ferguson/Lake Creek/Prairie Mountain forest roads is to reduce sedimentation to streams and improve the infrastructure of deteriorating culverts and ditchlines. Indirect effects include, improving water quality and fish habitat, and providing for a safer road surface for a projected increase in vehicle use.

Cumulative long term effects of paving these sections of forest road include a decrease in sedimentation and improvement in water quality and fish habitat.

**Weeds** – Scotch Broom and meadow knapweed occur in the project area. Both species are spread by vehicles and animals; equipment driving through infested areas could spread seed. The knapweed has been mowed to reduce seed set, but seed may still be present in the soil.

Paving the road would reduce the amount of weeds by reducing available soil for weed growth and separating vehicles from weed infested areas, but increased traffic due to paving could bring new weeds to the areas. Reducing sedimentation from the road could reduce the spread of weeds via water carried seeds.

Even if eradicated on BLM lands in the project area, meadow knapweed and Scotch broom could be reintroduced from infestations on other lands nearby.

Washing equipment used on the project prior to entering BLM lands could prevent new weeds and invasive plants from being introduced to the area.

**Wildlife** – Other than brushing and possible removal of occasional small saplings on road shoulders, wildlife habitat would not be modified. These activities would be confined to the existing road prisms; therefore, impacts to wildlife would be more a result of audio disturbance than habitat manipulation.

Some species or individual animals are more tolerant of human caused disturbance than others, but all tend to be more susceptible during their reproductive season. Roads proposed for improvement traverse a variety of habitat types, including stands suitable for Federally listed or other sensitive species. Activities associated with this project would occur throughout spring and summer (breeding and rearing season of many wildlife species), and the project may take up to six years (see page 4, number 3, for operating season ) to complete.

Three historic northern spotted owl nest sites exist within 0.25 mile of the proposed project and are subject to annual nesting surveys. Since reproductive success and nest tree location may vary between years, these surveys are important in determining current reproductive status and nest locations.

Because of location and timing, there would be potential for disturbance to these owls during nesting. This information has been shared with the U.S. Fish and Wildlife Service (USFWS) in the form of a Biological Assessment (BA). Their response in a Biological Opinion (BO) will include any mitigation measures necessary to reduce negative impacts resulting from the proposed chip seal project.

Habitat suitable for the marbled murrelet exists in the form of scattered older groves and individual trees along the project route. No surveys for this species have been conducted in the area, but it is recognized this habitat may support undetected murrelets. This species and potential disturbance are also addressed in the above mentioned BA and a response from USFWS will be included in the subsequent BO.

A Bald Eagle Habitat Area (BEHA) is located within 0.25 mile of the project route. This BEHA is part of a network of such areas delineated in 1994 to provide future nesting and foraging opportunities for an increasing bald eagle population. Currently, no eagles are occupying this BEHA. Eagles would not be affected by this proposed action.

Although the proposed action may result in altering daily routines of some other species, this action is not expected to adversely impact their overall lifestyle or survivability.

## **C. ALTERNATIVE 2 – MODIFIED PROPOSED ALTERNATIVE**

**Vegetation** –The short term project related disturbance and associated temporary reduction of roadside and streamside vegetation associated with this alternative would be similar in nature to the Proposed Action, Alternative 1.

Long term, Road Nos. 15-7-23 and 15-7-17 would continue to need grading, blading, and periodic additions of rock to the roadway.

**Fish** – The action of not paving the Prairie Mountain road segment would have no effect on fish or aquatic species. Potential sediments produced from this ridge line road would be expected to be intercepted in the adjacent forest vegetation and not enter headwater streams.

**Recreation** – Under this alternative, occasional equestrian use would have a safer surface to ride on compared to a paved surface. Other dispersed recreational activities wouldn't be affected.

**Social Economic** – Not paving the Prairie Mountain road segment (15-7-23 and 15-7-17) would have the effect of continued high road maintenance and repair cost. Currently these roads require maintenance three to four times a year. With a bituminous surface road, maintenance would be reduced to mainly roadside brushing.

**Soil** – Direct effects include more potential sedimentation from gravel portions of road. Indirectly water quality could potentially be more impaired than Alternative 1.

**Wildlife** – The application of 8-inches of aggregate would have the same impacts to wildlife and to disturbance as would application of a bituminous surface. In the long term, however, the bituminous surface road would require less maintenance and result in less disturbance to wildlife through time.

#### **D. ALTERNATIVE 3 – MODIFIED PROPOSED ALTERNATIVE**

**Vegetation** – The short term project related disturbance and temporary reduction of roadside and streamside vegetation associated with Alternative 3 would be similar to Alternative 1 and Alternative 2.

Long term, Road Nos. 15-7-23, 15-7-17, and 15-7-35, would continue to need grading, blading and periodic additions of rock to the roadway.

**Fish** – This alternative is similar to the proposed action, with the exception of not paving the 15-7-35 road segment along Hult Reservoir. Instead, the current road would be rocked with an 8-inch lift of compacted aggregate. Initially, sediment production from the road into the reservoir and feeder tributaries after completing the "lift" would likely be nominal. However, over time, the road surface would wear to its current condition and increase production of silt to the aquatic system.

**Recreation** – Under this alternative, occasional equestrian use would have a safer surface to ride on compared to a paved surface. Other dispersed recreational activities wouldn't be affected.

**Social Economic** – The action of not paving Prairie Mountain (15-7-23 and 15-7-17) and the north part of Lake Creek (15-7-35) roads would have the effect of continued high road maintenance and repair cost. Currently, these roads require road maintenance three to four times a year. With a bituminous surface, road maintenance would be reduced to once annually, mainly road side maintenance brushing.

**Soil** – Direct effects include higher potential sedimentation and indirect effects include a higher potential for water quality issues than Alternative 1 and Alternative 2.

**Wildlife** – The application of 8-inch aggregate would have more impacts on wildlife than the bituminous surface over the long term. Gravel roads require more periodic maintenance than a bituminous surface.

#### **E. ALTERNATIVE 4 - NO ACTION**

**Vegetation** – There would be no short term project related disturbance and associated temporary reduction of roadside and streamside vegetation with the no action alternative.

Long term, Road Nos. 15-7-23, 15-7-17, 15-7-35, and 15-7-26 would continue to need grading, blading, and periodic additions of rock to the roadway.

**Fish** – Under a No Action Alternative, no additional actions would be taken to replace culverts or stabilize roads. Culvert and road work already occur as part of the District road maintenance program. However, the emphasis would be on road stability and not on assisting with recovery of the aquatic system and its associated fauna.

**Recreation** – Under this alternative, occasional equestrian use would have a safer surface to ride on compared to a paved surface. Other dispersed recreational activities wouldn't be affected.

**Social Economic** – No action would have the effect of continued high road maintenance and repair cost, reduced public safety, and a higher potential for water quality and sedimentation problems that may result from future timber and gravel hauling on these roads.

**Soil** – The direct effect of not paving the proposed mainline roads is to allow sedimentation to occur from an increasing amount of projected traffic and from the tread surface of the road. Cutslopes would continue to deliver sediment to stream systems through long ditch infeed lengths. Indirect effects include the potential for culverts to fail and drainage to be rerouted, potentially causing road failures and impacts to soil productivity, water quality and fish habitat, and not providing a safer road surface for the projected increase in traffic.

**Wildlife** – Road surfaces would remain as is and no disturbance (as described under the proposed alternative) from resurfacing would occur. Disturbance takes place periodically as the road is maintained.

## VII. CONSULTATION AND COORDINATION

- A. Project Development** – The proposed action and alternatives were developed and analyzed by the following interdisciplinary team of BLM specialists:

NAME	TITLE	DISCIPLINE
Karin Baitis	Soil Scientist	Soils
Mark Stephen	Forest Ecologist	Ecology
Eric Meyers	Engineer	Roads/Transportation
Dave Reed	Fuels Specialist	Fuels/Air Quality
Michael Southard	Archaeologist	Cultural Resources
Phil Redlinger	Silviculturist / Timber Planner	Silviculture
Al Corbin	Timber Manager	Timber
Dan Crannell	T & E and Wildlife Biologist	Wildlife Habitat
Leo Poole	Fisheries Biologist	Fisheries
Cheshire Mayrsohn	Botanist	Botanical Resources
Saundra Miles	Recreation Planner	Visual Resources and Recreation
Gary Hoppe	Landscape Planner	Planning and Environmental Coordination
Graham Armstrong	Forest Hydrologist	Hydrology

### **B. Consultation**

**Wildlife** – This action is included in the FY 2002 Disturbance Biological Assessment and is currently being reviewed by the U.S. Fish and Wildlife Service. A response from USFWS in the form of a Biological Opinion is expected in early March, 2002. Any required mitigation measures contained in this document would be incorporated into this proposed action.

**Fisheries** – The proposed chip sealing project is within the description and guidelines for the Road Maintenance element under the Programmatic Biological Assessment for the Oregon coastal coho salmon as extended by the National Marine Fisheries Service, 21 December 2001, #OSB2001-0217-PC-RI so no consultation is required for the Oregon coastal coho salmon, Critical Habitat, or Essential Fish Habitat (OSB2001-0070-IEC).

## VIII. REFERENCES

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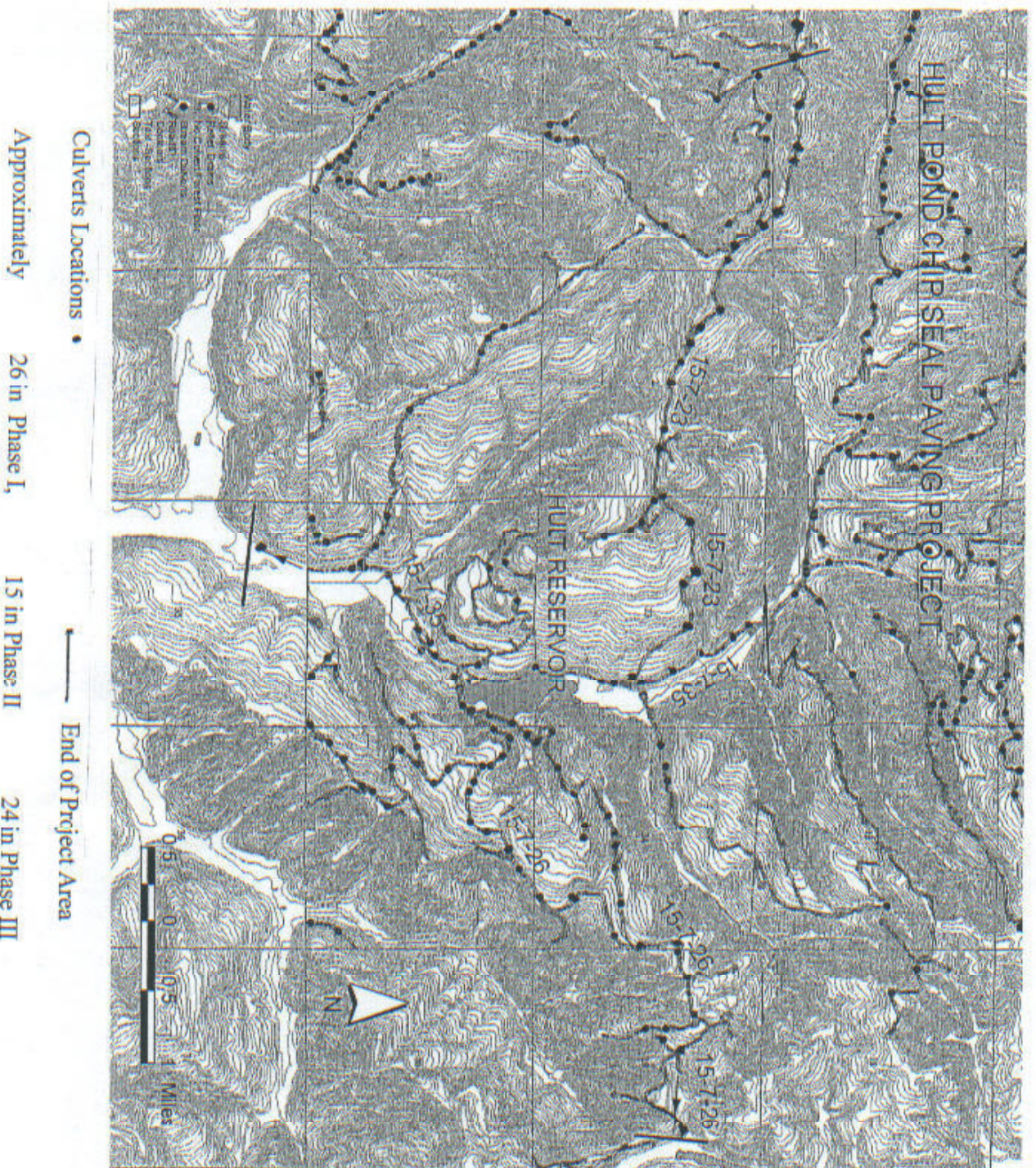
UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
EUGENE DISTRICT OFFICE  
Preliminary  
Finding of No Significant Impact  
for  
Lake Creek Road Improvement  
OR O90-EA-02-07

Determination:

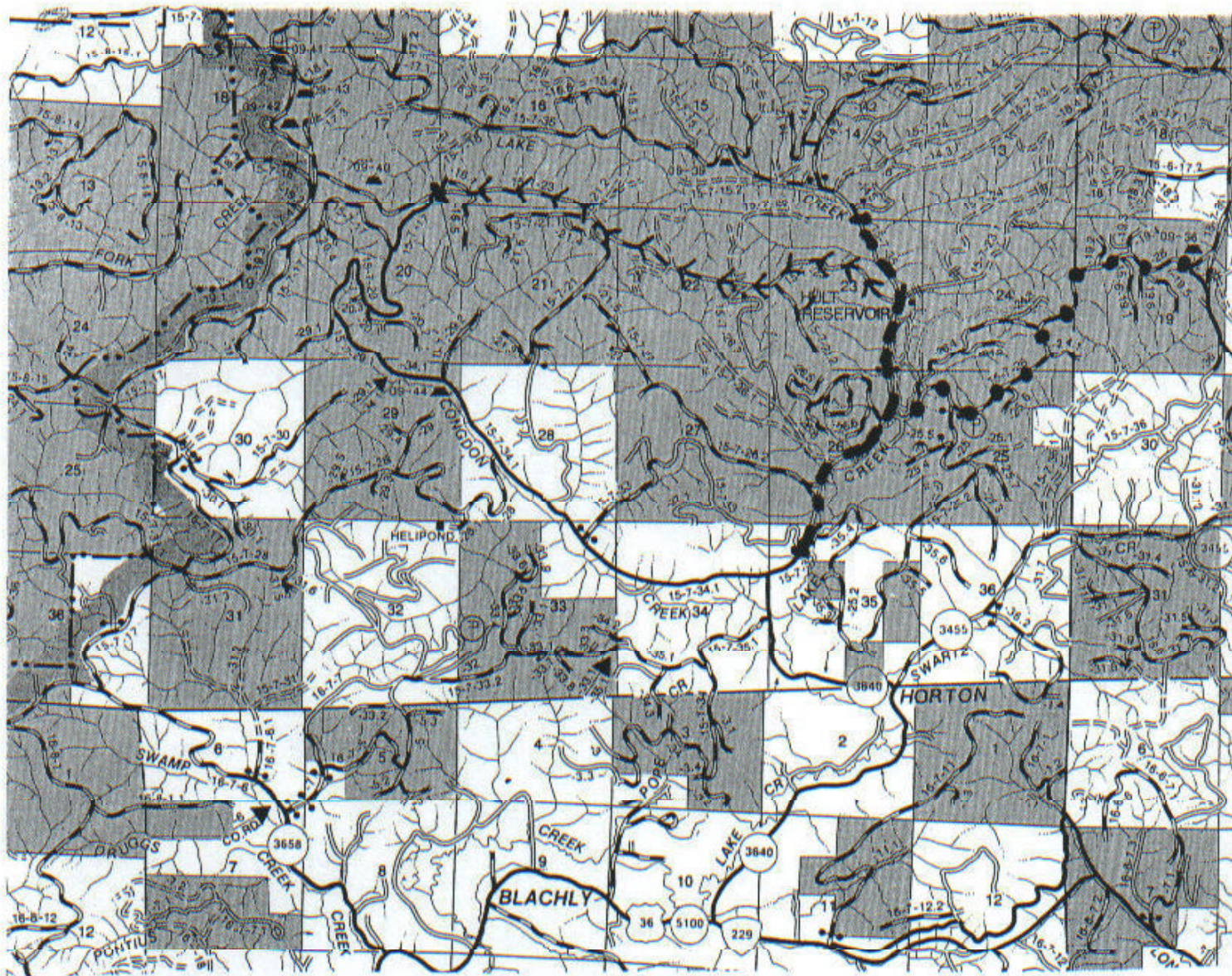
On the basis of the information contained in the Environmental Assessment, and all other information available to me, it is my determination that implementation of the proposed action or alternatives will not have significant environmental impacts beyond those already addressed in the *Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (April 1994), and the *Eugene District Record of Decision and Resource Management Plan* (June 1995) as amended by the *Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, USDA Forest Service and USDI Bureau of Land Management January 2001*; with which this EA is in conformance, and does not, in and of itself, constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.



FIGURE 1










## EA Map

### Lake Creek Road Improvement Project

	Phase I	Ferguson Road	Rd# 15-7-26
	Phase II	Lake Creek Road	Rd# 15-7-35
	Phase III	Prairie Mtn Road	Rd# 15-7-23 and 15-7-17